Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Previously Presented) The nucleic acid molecule of claim 11, where the nucleic acid molecule is purified from a mammal.

3. (Canceled)

4. (Presently Amended) A nucleic acid probe ~~comprising~~ consisting of a nucleotide sequence that encodes a polypeptide comprising at least 10 contiguous amino acids of SEQ ID NO: 1, wherein said probe binds to a DNA molecule or an RNA molecule encoding FRS2 polypeptide.

5. (Previously Presented) A nucleic acid vector comprising the nucleic acid probe of claim 4 and a promoter effective to initiate transcription in a host cell.

6. (Previously Presented) A recombinant cell or tissue comprising the nucleic acid probe of claim 4.

7-10. (Canceled)

11. (Previously Presented) An isolated, enriched, or purified nucleic acid molecule comprising a nucleotide sequence that:

(a) encodes a Fibroblast Growth Factor Receptor Protein Kinase Substrate 2 (FRS2) polypeptide having the full length amino acid sequence set forth in SEQ ID NO: 1; or

(b) is the complement of the nucleic acid sequence of (a).

12. (Previously Presented) A nucleic acid vector comprising a nucleic acid molecule of claim 11.

13. (Previously Presented) A recombinant cell or tissue comprising a nucleic acid molecule of claim 11.

14.-19. (Canceled)

20. (Previously Presented) The nucleic acid molecule of claim 11, wherein said nucleic acid molecule is fused to a nucleic acid molecule encoding a second protein.

21. (Previously Presented) The nucleic acid molecule of claim 20, wherein said second protein is selected from the group consisting of hemagglutinin, GST, maltose binding-protein, or a fragment of any one of said second proteins.

22. (Presently Amended) The nucleic acid probe of claim 4, wherein said probe ~~comprises~~ consists of a nucleotide sequence that encodes a polypeptide comprising at least 100 contiguous amino acids of SEQ ID NO: 1.

23. (Previously Presented) The nucleic acid molecule of claim 20, wherein said nucleic acid molecule encodes a FRS2 polypeptide having the full length amino acid sequence set forth in SEQ ID NO: 1.

24. (Canceled)

25. (Presently Amended) A ~~The isolated, enriched, or purified~~ nucleic acid probe ~~molecule of claim 11, wherein said nucleic acid molecule~~ that

(a) ~~comprises~~ consists of a nucleotide sequence that encodes a FRS2 polypeptide having the amino acid sequence of the sequence set forth in SEQ ID NO: 1 except that

~~(a) encodes a FRS2 polypeptide having the full length amino acid sequence of the sequence set forth in SEQ ID NO: 1 except that~~ it lacks at least one, but not all, of the following segments of amino acid residues: 1-10, 11-152, or 153-508; or

(b) is the complement of the nucleic acid sequence of (b),

wherein said probe binds to a DNA molecule or an RNA molecule encoding FRS2 polypeptide.

26. (Presently Amended) A~~The isolated, enriched, or purified~~ nucleic acid probe ~~molecule of claim 11, wherein said nucleic acid molecule~~ that

(a) ~~comprises~~ consists of a nucleotide sequence ~~that~~ encoding a FRS2 polypeptide having the amino acid sequence of the sequence set forth in SEQ ID NO: 1 except that

~~(a) encodes a polypeptide having the full length amino acid sequence set forth in SEQ ID NO: 1 except that~~ it lacks at least one, but not all of the domains selected from the group consisting of a myristylation region, a phosphotyrosine binding region, and a C-terminal region; or

(b) is the complement of the nucleic acid sequence of (a),

wherein said probe binds to a DNA molecule or an RNA molecule encoding FRS2 polypeptide.

27. (Presently Amended) A~~The isolated, enriched, or purified~~ nucleic acid probe ~~molecule of claim 11, wherein said nucleic acid molecule comprises~~ consisting of a nucleotide sequence that encodes a FRS2 polypeptide which has at least 90% sequence identity to the amino acid sequence set forth in SEQ ID NO: 1 and has Grb-2 binding activity~~regulates growth factor stimulation of cellular differentiation and cellular proliferation;~~,

wherein said probe binds to a DNA molecule or an RNA molecule encoding FRS2 polypeptide.

28. (Presently Amended) A ~~The isolated, enriched, or purified~~ nucleic acid probe ~~molecule of claim 11, wherein said nucleic acid molecule~~ that

(a) ~~comprises~~ consists of a nucleotide sequence ~~that~~ encoding

~~(a) encodes a polypeptide having~~ the amino acid sequence of ~~set forth in SEQ ID NO: 1 from~~ amino acid residues 1-10, 11-152, or 153-508 of SEQ ID NO: 1; or

(b) is the complement of the nucleic acid sequence of (a),

wherein said probe binds to a DNA molecule or an RNA molecule encoding FRS2 polypeptide.

29. (Presently Amended) A~~The isolated, enriched, or purified~~ nucleic acid probe ~~molecule of claim 11, wherein said nucleic acid molecule~~ that

(a) ~~comprises~~ consists of a nucleotide sequence ~~that:~~

~~(a) encodes~~ encoding

(i) a FRS2 polypeptide having the full length amino acid sequence set forth in SEQ ID NO: 1 ~~as set forth in claim 11 (a), claim 25 (a), or 28 (a)~~ containing one or both of the following mutations: tyrosine 349 to phenylalanine or tyrosine 392 to phenylalanine; (ii) a FRS2 polypeptide having the amino acid sequence set forth in SEQ ID NO: 1 except that it lacks at least one, but not all, of the following segments of amino acid residues: 1-10, 11-152, or 153-508 containing one or both of the following mutations: tyrosine 349 to phenylalanine or tyrosine 392 to phenylalanine; or a FRS2 polypeptide having the amino acid sequence set forth in SEQ ID NO: 1 from amino acid residues 153-508 containing one or both of the following mutations: tyrosine 349 to phenylalanine or tyrosine 392 to phenylalanine; or

(b) is the complement of the nucleic acid sequence of (a),

wherein said probe binds to a DNA molecule or an RNA molecule encoding FRS2 polypeptide.